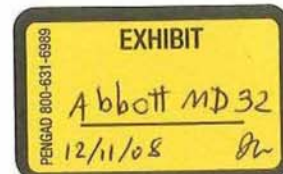


EXHIBIT 146

(Part 1)

From: Margaret Blasi
To: Kramer, Cathy
CC: Albert, Sarah; Blasi, Margaret; Brecher, Andrew; Coats, Christopher; ...
Date: 1/18/2007 9:36 AM
Subject: JCR Page 114 -DHMH\MA-Pharmacy Dispensing Fees_OGA# 568
Attachments: 114-MA-pharmacydispensingfeeReport_OGA#568.doc; 114_MA-DispensingfeeLTR_01-05-07_OGA# 568.doc; 114_MA-pharmacydispensingfee_attach1_OGA#568_.doc; 114_MA-pharmacydispensingfee_attach2_OGA#568.doc



Cathy,
Attached is DHMH's response to JCR Page 114 (2006) Pharmacy Dispensing Fees.

The attachments include:
Letter to Chairmen of B&T, FIN, APP and HGO
Report
Attachment 1
Attachment 2

Thank you,
Margaret

Margaret Blasi
DHMH Office of Governmental Affairs
201 West Preston Street
Baltimore, MD 21201
410-767-6480 FAX: 410-767-6483

MD0003813

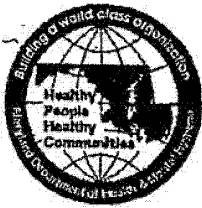
MOOQ

Cost of Dispensing Prescription Drugs: The federal Deficit Reduction Act of 2005 changes the maximum price Medicaid pays for multiple-source drugs from 150% of the lowest published price (usually the wholesale acquisition cost) for a drug to 250% of the lowest average manufacturer price (AMP). The AMP is the average price that manufacturers receive for sales to retail pharmacies. The revision takes effect on January 1, 2007. The Congressional Budget Office estimates this provision will reduce Medicaid spending by \$3.6 billion over the 2006 – 2010 period.

The provision in the Deficit Reduction Act applies only to a drug's ingredient costs and does not include dispensing fees, which continue to be determined by the states. Maryland's Medicaid dispensing fees - \$2.69 for nonpreferred brand-name drugs and \$3.69 for preferred brands and generics - fall well below the national average of \$4.50. The low dispensing fee, combined with the reductions in reimbursement for ingredient costs, could reduce Medicaid payments for prescription drugs below what it costs the pharmacy to purchase and dispense the drugs.

The committees direct the Department of Health and Mental Hygiene to conduct a study of the cost to pharmacies of dispensing prescription drugs to Medicaid enrollees. If the department requires the assistance of an outside entity to conduct the study, the department shall conduct an open procurement process. The study shall (1) examine current research on Medicaid prescription dispensing fees, including dispensing fees in other states; (2) compare actual prescription drug acquisition costs to the reimbursement rates that will be in effect on January 1, 2007; and (3) make a recommendation on the pharmacy dispensing fee, as needed. The department shall report its findings and recommendations to the budget committees, as well as the Senate Finance Committee and the House Health and Government Operations Committee, on or before November 1, 2006.

Information Request	Author	Due Date
Study of pharmacy dispensing fees	DHMH	November 1, 2006



STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street • Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers, Secretary

JAN 17 2007

The Honorable Ulysses Currie
Chairman
Senate Budget and Taxation Committee
3 West Miller Senate Office Bldg.
Annapolis, MD 21401-1991

The Honorable Norman H. Conway
Chairman
House Appropriations Committee
131 Lowe House Office Bldg.
Annapolis, MD 21401-1991

The Honorable Thomas M. Middleton
Chairman
Senate Finance Committee
3 East Miller Senate Office Bldg.
Annapolis, MD 21401-1991

The Honorable Peter A. Hammen
Chairman
House Health and Government Operations
Committee
241 House Office Bldg.
Annapolis, MD 21401-1991

RE: 2006 Joint Chairmen's Report (P. 114) – Study of Pharmacy Dispensing Fees

Dear Chairmen Currie, Middleton, Conway and Hammen:

In keeping with the requirements of the 2006 Joint Chairmen's Report, the Department is submitting the enclosed report on the cost to pharmacies of dispensing prescription drugs to Medicaid patients. The report examines current research on Medicaid prescription dispensing fees (including dispensing fees in other states) and compares actual prescription drug acquisition costs to the reimbursement rates that will be in effect on January 1, 2007 as a result of the federal Deficit Reduction Act of 2005.

If further information is required, please contact Jeff Gruel, Director of Maryland Pharmacy Programs, at (410) 767-1456.

Sincerely,

Susan Steinberg
Chief Operating Officer

Enclosures

cc: Anne Hubbard
Tricia Roddy
Jeff Gruel

Toll Free 1-877-4MD-DHMH • TTY for Disabled - Maryland Relay Service 1-800-735-2258
Web Site: www.dhmh.state.md.us

MD0003815

Medicaid Dispensing Fee Survey and Analysis

The 2006 Joint Chairmen's Report required the Department of Health and Mental Hygiene to study and report on the cost to pharmacies of dispensing prescription drugs to Medicaid patients. This report examines current research on Medicaid prescription dispensing fees (including dispensing fees in other states) and compares actual prescription drug acquisition costs to the reimbursement rates that will be in effect on January 1, 2007 as a result of the federal Deficit Reduction Act of 2005. Based on the results of this study, the Department does not endorse a revision of the dispensing fee at this time. Instead, the Department recommends waiting until federal regulations are published in 2007 and the final federal upper limits have been released and implemented to gauge the impact of these measures on Medicaid prescription drug costs.

Current Reimbursement Policy

Nationally-published drug prices – average wholesale price and wholesale acquisition cost – tend to be higher than the actual drug acquisition costs of pharmacies, in part due to discounts and other incentives provided by drug manufacturers. Pharmacies receive reimbursement for Medicaid prescriptions based upon a dispensing fee plus an amount to cover the cost of the ingredient or product dispensed.

Maryland's formula for determining the price to be paid for reimbursement of ingredients is based upon the lesser of four pricing formulae:

- Estimated Acquisition Cost (EAC) which is the lowest of: Wholesale Acquisition Cost (WAC) plus 8 percent, Direct Price plus 8 percent or Average Wholesale Price (AWP) minus 12 percent; or
- Federal Upper Limit (FUL) for multiple-source drugs; or
- Maryland State Maximum Allowable Cost (MAC) for multiple-source drugs; or
- The pharmacy's usual and customary charges.

Since the Department receives rebates from drug manufacturers under the Medicaid Rebate Program, the Department realizes a net cost for drugs at a level representing their "best price" while reimbursing pharmacies for brand-name drugs at a rate above their acquisition cost (wholesale acquisition cost plus 8 percent). The dispensing fee that is assessed by the pharmacy itself is a fixed amount. *Both components – estimated acquisition costs and actual dispensing fees – must be considered when determining whether pharmacists are paid appropriately.*

The second reimbursement formula, federal upper limits, applies only to multiple-source or generic drugs and is being revised in accordance with the Deficit Reduction Act of 2005 (DRA). Effective January 1, 2007, the new federal upper limits will consist of 250 percent of the average manufacturer price, replacing 150 percent of the lowest published price. Preliminary new FUL prices appear lower than the existing FUL prices. DHMH completed a comparison of these prices using the preliminary FUL figures issued by the federal government. The comparison revealed that in the aggregate, the Department may realize \$2 million in annual savings. This reduction in the drug acquisition cost is much smaller than many have anticipated. One explanation is that the AMP price list does not take into consideration the Maryland Medicaid

MAC figures, which have historically been lower than most FUL prices. These savings cannot be assured, since federal regulations finalizing the methodology for calculation of the AMP will not be issued until mid-2007 (the Bush Administration recently announced a proposed rule on definition of AMP in accordance with the DRA; after a public comment period, a final regulation must be promulgated by July 1, 2007). Until then, the methodology of calculating the AMP is not final and therefore, AMP prices may fluctuate from currently issued prices.

Dispensing Fees

For retail pharmacies Maryland's dispensing fee is currently \$3.69 for generic drugs and preferred brand name drugs; the dispensing fee for other brand name drugs is \$2.69. For long-term care pharmacies, the dispensing fees are \$4.69 and \$3.69 respectively. A review of dispensing fees from other states indicates that Maryland's dispensing fee appears to be consistent with other states (see Attachment 1). Other state Medicaid retail pharmacy fees vary from a low of \$1.75 in New Hampshire to a high of \$7.25 in California.

Cost of Dispensing Survey

The Medicaid Pharmacy Program, through competitive bidding, has contracted with the University of Maryland School of Pharmacy's Pharmaceutical Health Services Research Department to analyze data collected from a recent survey regarding the cost to pharmacies of dispensing prescription drugs to Medicaid enrollees. The survey was posted on the Maryland Pharmacy website from October 6-23, and Maryland pharmacies were encouraged to complete the survey on-line. Out of approximately 1,100 pharmacies in the state, 387 submitted responses. Many of these were from chain pharmacies that submitted off-line composite entries for all their stores in Maryland. The survey instrument was based upon a survey used by the State of Maine and endorsed and provided to the Maryland Medicaid Pharmacy Program by the Maryland Association of Chain Drugstores. With the help of the School of Pharmacy, the survey was minimally expanded to meet the needs of the analysts. A copy of the survey analysis is attached (see Attachment 2) and it includes a copy of the actual survey. The analysis of the survey submissions reveals that the average cost of dispensing per prescription is \$11.71 with a median cost of \$10.67. However, analysts of the data emphasize that due to limitations of the survey (i.e., data was self-reported), the findings should be interpreted with caution. In addition, no state or third party payer offers that amount as a dispensing fee. A dispensing fee increase approaching the median cost of \$10.67 would cost the Maryland Medicaid program over \$8 million (total funds) annually. Again, this does not mean that pharmacists are not receiving adequate payment. One needs to examine the profit levels that are obtained with the acquisition costs.

Other Factors

Complicating the pricing picture even more is the fact that several discount department stores have announced unusually low prescription prices for certain generic drugs. One chain discount department store offers prescriptions for over 300 different drugs at \$4.00, including the price of ingredients and the dispensing fee. These new low prices are only a few pennies more than

Maryland Medicaid's current dispensing fee. This would appear to support the adequacy of the current Maryland Medicaid dispensing fee.

Conclusion

Based on preliminary analysis, it appears that the new federal upper limits will have a small reduction on Maryland Medicaid's reimbursement for generic drugs (approximately \$2 million in annual savings). All components – acquisition costs as well as the actual dispensing fee – should be taken into consideration when determining whether pharmacists are adequately paid. Since Maryland's current dispensing fee appears to be consistent with other states' fees, and in light of the latest trend by several chain discount department stores to offer generic prescriptions at very low prices, a revision of Medicaid's dispensing fee is not recommended at this time. Rather, it would be wise to wait until after federal regulations are published next July and the final federal upper limits have been released and implemented.

**ATTACHMENT 1
STATE DISPENSING FEES 12/06/06**

STATE	REIMBURSEMENT FORMULA	DISPENSING FEE
ALABAMA	Lowest of SMAC, FUL, WAC+9.2%, or AWP-10%	\$5.40
ALASKA	AWP-5%	\$3.45 - \$11.46 (long term care @ \$11.46)
ARIZONA (data pertains to FFS population only; most AZ reclk. in MCOs)	AWP-15%	\$2.00
ARKANSAS	AWP-14% for brand; AWP-20% for generics	\$5.51; \$2.00 for non MAC'd generics
CALIFORNIA	Brand or generic: AWP minus 17%	\$7.25-pharmacies; \$8.00-SNF's; U&C
COLORADO	Brand: AWP-13.5%. Generic: AWP-35%, MAC/FUL, WAC+18% or U&C	\$4.00-retail; \$1.89-340B pharmacies; \$0.00-govt pharmacies
CONNECTICUT	AWP-14%	\$3.15
DISTRICT OF COLUMBIA	AWP-10%	\$4.50
DELAWARE	AWP-14% or 16%	3.65 [1 disp fee per pdt every 23 days unless drug is on exclude list (e.g., antibiotics)]
FLORIDA	Lower of: AWP-15.4% or WAC + 5.75%, or state MAC or federal MAC or the usual and customary	\$4.23
GEORGIA	Brand or generic: AWP-11% or MAC/FUL or most favored price	\$5.13 for generics; \$4.63 for brands
HAWAII	AWP-10.5%	\$4.67-pharmacies; \$0.50-physician dispensed
IDAHO	Lower of AWP-12%, SMAC, FUL or usual & customary	\$4.94; \$5.54 for unit dose
ILLINOIS	<u>Medicaid:</u> AWP-12.% (brand) AWP-25% (generic) <u>SeniorCare:</u> AWP-14% (brand), AWP-25% (generic)	<u>Medicaid:</u> \$4.60 (generic) \$3.40 (brand) <u>SeniorCare:</u> \$2.25 (all)
INDIANA	AWP-13.5% (brand) AWP-20% (generic)	\$4.90
IOWA	AWP-12%	\$4.26
KANSAS	AWP-13% (brand) AWP-27% (generic)	\$3.40
KENTUCKY	AWP-15% for brand; AWP-14% for generics	\$4.50 for brand; \$5.00 for generic
LOUISIANA	AWP-13.5% for independent pharmacies; AWP-15% for chain pharmacies	\$5.77
MAINE	AWP - 15%	\$3.35-MaineRx; \$2.35 MaineRx DEL (Drugs for the Elderly)
MARYLAND	WAC+ 8% or DP + 8% or AWP-12%	For Community pharmacies: \$3.69 for PDL & generics; \$2.69 for brands
MASSACHUSETTS	Lower of MAC/FUL or WAC+5% (equates approx. to AWP minus 16% for brands)	\$3.00
MICHIGAN	AWP-13.5% for independent pharmacies; AWP-15% for chain pharmacies (>5 stores)	\$3.77
MINNESOTA	AWP-11.5%; Generics: AWP-12%+\$3.65 or MAC/FUL + 3.65	\$3.65
MISSISSIPPI	Sole Source - Lower of U/C, AWP-12% or WAC + 9%; Generics - Lower of FUL, AWP-25%	Effective 07-01-05: Sole Source - disp fee is \$3.91; Generics - disp fee is \$4.91; LTC - disp fee is \$3.91 for all Sole Source and Generics

**ATTACHMENT 1
STATE DISPENSING FEES 12/06/06**

STATE	REIMBURSEMENT FORMULA	DISPENSING FEE
MISSOURI	AWP-10.43%; WAC+10%; MAC/FUL; UCR. Extensive MAC list.	\$4.09 + \$3.95 enhanced fee subject to provider tax
MONTANA	AWP-15%	Variable \$2.00-\$4.70 based on avg cost of filling a Rx as determined by the MT disp fee survey. \$3.50 fee paid to out of state providers.
NEBRASKA	Brand or generic: AWP-11% or MAC/FUL + disp fee.	\$3.27-\$5.00
NEVADA	Brand or generic: AWP-15% or MAC/FUL	\$4.76
NEW HAMPSHIRE	AWP-16%	\$1.75
NEW JERSEY	AWP-12.5%	\$3.96
NEW MEXICO	AWP-14% or MAC/FUL	\$3.65
NEW YORK	For brands AWP-12.75%; for generics AWP-16.5%	\$3.50 Brand \$4.50 Generic
NORTH CAROLINA	AWP-10%; extensive SMAC list	\$5.60 for generics & selected OTCs; \$4.00 for brands; \$0.00 fee for same-month refills.
NORTH DAKOTA	AWP-10% or WAC+12.5%	\$5.60 for generics; \$4.60 for brands
OHIO	WAC+9%; Generics: pays for MAC'd generics at 65th percentile of actual acquisition cost (averages AWP minus 60%)	\$3.70
OKLAHOMA	AWP-12% or MAC/FUL (State MACs are approx AWP-60%)	\$4.15
OREGON	AWP-15%retail-AWP-11% Institutional	\$3.50 / \$3.91
PENNSYLVANIA	Lesser of FDB, MDX, Medispan pricing used; Brands = Lesser of AWP-14%, WAC+7%; Generics = Lesser of AWP-25%, WAC+66%, FUL or State MAC	\$4.00
RHODE ISLAND	For either brand or generic: WAC+5% or FUL - whichever is lower.	\$2.85 LTC; \$3.40 Ambulatory
SOUTH CAROLINA	Lowest of AWP-10% or SMAC/FUL or U&C. State has an extensive SMAC list.	\$4.05
SOUTH DAKOTA	AWP-10.5%	\$4.75
TENNESSEE (TennCARE)	AWP-13% or MAC/FUL	\$2.50
TEXAS	AWP-15% or WAC+12%	\$5.14 fee with variable add on
UTAH	AWP-15%	3.90 Urban; \$4.40 rural
VERMONT	Lesser of 1) AWP - 11.9% + dispensing; 2) HCFA FUL + dispensing; 3) VT (First Health) MAC (AB rated generics w/ at least 3 available, select products) + dispensing; 4) U&C including dispensing	\$4.25 plus limited incentives
VIRGINIA	AWP-10.25%	\$3.75
WASHINGTON	AWP-14% (brand) AWP-50% (if > 5 mfg)	\$4.20-\$5.20
WEST VIRGINIA	AWP-12%	\$3.90
WISCONSIN	AWP-13%	\$4.88-\$40.11
WYOMING	AWP-11%	\$5.00

ATTACHMENT 2

Analysis of Cost of Prescription Drug Dispensing in Maryland

Report on the Cost of Prescription Dispensing
(M00SO220705 Pharmacy Dispensing Cost Analysis)

C. Daniel Mullins, PhD, Principal Investigator
Amy Davidoff, PhD, co-Principal Investigator
Francis B. Palumbo, PhD, Esq, co-Investigator
Françoise G. Pradel, PhD, co-Investigator
Julia Ju, PharmD, Lead Research Assistant

The authors wish to acknowledge the technical assistance of Lisa Blatt, MA, for assistance in preparing this Report and Philip H. Cogan, RPh and Athos Alexandrou, MBA from Maryland Medicaid for their assistance in obtaining and interpreting survey responses, and Tammy Balzano of the DHMH Information Resources Administration for computer programming support.

Produced for the State of Maryland
Department of Health and Mental Hygiene
By the University of Maryland School of Pharmacy
Pharmaceutical Health Services Research Department

December 7, 2006



UNIVERSITY OF MARYLAND
SCHOOL OF PHARMACY

MD0003821

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Chapter 1

Executive Summary

Most states pay a fixed dispensing fee for Medicaid prescriptions. There is considerable variance across states in the amount reimbursed with amounts ranging from \$3 to more than \$6 per prescription. A report by the United States General Accountability Office (GAO)¹ concluded that dispensing fee reimbursements in many states may be less than the actual dispensing costs to pharmacies. The Deficit Reduction Act of 2006 revises the Medicaid Program's reimbursement for generic drugs effective January 1, 2007. Under this Act the calculation of federal upper limits for reimbursement of generic drugs is being revised. Medicaid must use federal upper limits in its reimbursement methodology for generic drugs. Due to concerns that this revised federal limit will result in reimbursement for generic drugs below pharmacies' costs, the Department has been instructed to conduct a study of the cost to pharmacies to dispense prescription drugs to Medicaid recipients. To determine the cost of dispensing a prescription in Maryland, the Department of Health and Mental Hygiene (DHMH) administered a survey to pharmacies in the State. Researchers at the University of Maryland School of Pharmacy used the self-reported data to calculate the cost of dispensing prescriptions and to examine the pharmacy characteristics that explain variation in costs.

The survey contained questions on various components of costs related to prescription drug dispensing, including salaries for pharmacists and other personnel, rent, utilities, computers and software, and other costs of doing business. The survey also contained questions related to the number of prescriptions dispensed and the proportion of prescriptions dispensed that were reimbursed by Medicaid. The survey was posted on the DHMH website from October 6, 2006 through October 23, 2006. Pharmacy organizations and individual pharmacies were encouraged by DHMH to complete and submit this survey. Respondents were provided with instructions to assist in completing the survey. Several chain pharmacies in the state responded directly to DHMH on behalf of their individual units, using a consolidated spreadsheet instead of the web-based survey.

A total of 387 valid responses were received, the vast majority of which (90%) came from Chain drug stores rather than Independent (9%) or Institutional pharmacies (1%).

¹ U. S. General Accounting Office (GAO), Federal employees' health benefits: effects of using pharmacy benefit managers on health plans, enrollees, and pharmacies. GAO-03-196. January, 2003.

The average cost of dispensing per prescription was \$11.71, with a median cost of \$10.67. The cost of dispensing per prescription was higher for pharmacies owned by corporations (\$11.80) than for pharmacies for which the type of ownership was not a corporation (\$7.34). Similarly, the average cost of dispensing per prescription was higher for Chains (\$12.00) than for Independents (\$9.02) or Institutions (\$9.83). The cost of dispensing decreased as the volume of prescriptions filled increased and the cost of dispensing increases with the proportion of Medicaid business. Multivariable analysis confirmed the significance and direction of these results. Multivariate analyses were also performed to estimate the marginal cost of dispensing an additional prescription, as opposed to the average cost. The marginal cost is estimated to be \$8.70. Due to the inability to adjust for underlying geographic differences in the cost of salaries and rent, these results must be interpreted with some caution.

In summary, the cost of dispensing a prescription in Maryland varies based upon a number of factors and ranges from more than \$7 to as much as \$12, depending on ownership type, volume of prescriptions, and the percentage of prescriptions paid for by Medicaid. The reported costs of dispensing for the State of Maryland are higher than previously reported figures from the 1990s and are consistent with other figures that have been reported in the last few years for other states.

Chapter 2

Methods

Overview

Information on the characteristics of pharmacies in Maryland, and operating and overhead costs of the pharmacy within the context of the entire store or institution were collected by DHMH through an internet based survey. The data were stripped of identifiers and transferred to the Department of Pharmaceutical Health Services Research at the University of Maryland, School of Pharmacy (UMDSOP). Data were checked for internal consistency, categories were grouped, and overhead costs were allocated to the pharmacy in a manner consistent with recognized accounting standards.² The individual pharmacy cost of dispensing (COD) per prescription was computed. Then the mean and median of the pharmacy CODs were computed overall and by pharmacy characteristics. Multivariate regression was used to understand how the COD at the individual pharmacy level is affected by the pharmacy's characteristics. Multivariate regression was also used to compute the marginal, as opposed to the mean COD.

Survey Development

The survey was designed to capture information on the characteristics of pharmacies in the state and to gather information on their operating and overhead costs related to the cost of dispensing prescription medicine. DHMH drew on the experience of other state Medicaid programs to identify the relevant characteristics and costs, and structured them in a user-friendly format. The University of Maryland School of Pharmacy provided assistance to the DHMH in refining the final survey instrument. A copy of the final survey instrument is provided in Appendix C.

Survey Data Collection

Participation was open to all pharmacies (community and institutional) in the State of Maryland. The DHMH contacted potential participants via listserves, and a Newsletter to all pharmacies to inform them about the survey, and to encourage them to participate. The survey was posted on the DHMH website. Several chain pharmacies in the state responded directly to DHMH on behalf of their individual units. Data were submitted by these corporations on Excel spreadsheets as opposed to using the online submission process. These data were merged with the data submitted online prior to the analysis of the combined dataset.

² Schafermeyer KW, Schondelmeyer SW, Thomas III J, Proctor KA. An analysis of the cost of dispensing third-party prescriptions in chain pharmacies. *Journal of Research in Pharmaceutical Economics*. 1992; 4(3): 3-24.

Computation of Cost of Dispensing (COD)

Pharmacies were asked to report their expenses from the 2005 tax year. Categories were provided for gross labor expense (salaries and benefits) for all pharmacists and pharmacy technicians, various categories of operating expenses for the prescription department, and various categories of other operating and overhead costs of the entire store that would be attributed to the prescription department. The survey also collected square footage and revenue statistics for the prescription department and the entire store, to be used to allocate other operating and overhead expenses to the prescription department. Labor expenses were adjusted based on the percent of time spent in the prescription department. Direct operating costs of the prescription department, collected from survey Table A, Section III, were included at 100% in the total COD. Other operating and overhead costs collected in survey Table B, Section III, were allocated to the prescription department based on either the area ratio or sales ratio. See Appendix C for a copy of the survey. Table 1 lists each category of cost and the basis for allocation. The area ratio was calculated by dividing total prescription department area (sum of square feet of prescription department, prescription register and patient waiting area, and stock room used for prescription drugs and containers) by the total store area (sum of square feet of total sales area and stock room for the entire store). The sales ratio was calculated by dividing the prescription department revenues by the total store revenues. Some pharmacies did not report the total store area or store revenues. When these respondents were contacted by DHMH, it was determined that these costs had already been allocated to the prescription department as part of each store's accounting process. The decision was made by DHMH to accept the reported costs as allocated.

Table 1 Cost Allocation Methodology Used in Cost of Dispensing Analysis

Cost Category	Allocation Basis
Personnel Costs	Adjusted by percent of time spent in prescription department, allocated at 100%
Prescription Department Operating Costs	100% allocated to cost of dispensing
Other Operating, Indirect or Overhead Costs	
Utilities	Area ratio
Depreciation	Area ratio
Property and real estate taxes	Area ratio
Building rent and equipment rent	Area ratio
Repairs	Area ratio
Operational and office supplies	Area ratio
Security	Area ratio
Insurance	Sales ratio
Interest	Sales ratio
Legal, accounting and professional fees	Sales ratio
Bad debts	Sales ratio
Credit card fees	Sales ratio
Advertising	Sales ratio
Central administration expenses	Sales ratio
Travel expenses	Sales ratio
Other taxes	Sales ratio
Other specified pharmacy expenses	100% allocated to cost of dispensing

Some reported values appeared to be extreme or otherwise did not match the expected ranges, and steps were taken to adjust those values. For example, some pharmacies reported extremely large labor costs for individual pharmacists. Since respondents may have grouped together the labor costs for multiple individuals it would not have been appropriate to cap the cost as if they were reported for individual pharmacists. Instead, labor costs were summed for all pharmacists reported, and a labor cost per prescription filled was calculated. This value ranged from 0.70 to 22.35. This statistic was capped at the 99th percentile (\$16.14 per prescription), and was used as the basis to cap total pharmacist labor cost included in the COD for each pharmacy. A similar process was used to cap extreme values for total pharmacy technician labor expense.

Other examples where adjustments were made include:

- Exclusion of drug ingredient costs when reported by pharmacies.
- Several respondents reported allocation statistics such that the area or sales ratio exceeded a value of 1.0 (100%). In these situations, the median allocation statistic from reporting pharmacies was substituted.

Total costs were calculated as the sum of adjusted personnel costs, prescription department operating costs, and the other operating and overhead costs that were allocated to the prescription department. The unit of analysis in this study was the mean pharmacy COD per prescription, which was calculated by dividing the total prescription dispensing-related costs for each pharmacy by the total number of prescriptions dispensed by that pharmacy during the year.

The mean and median pharmacy COD were calculated overall, and by characteristics including ownership, affiliation, physical setting, and size. Multivariate regression analyses were performed to examine the pharmacy characteristics and other factors that explain variation in pharmacy COD. Regression can be thought of as a statistical technique that allows the analyst to answer the question "What happens to COD if we make a small change to a single characteristic of interest, but don't change any of the other characteristics?" Regression analysis was also used to examine factors that affect the total pharmacy cost, and provides an estimate of the marginal cost of dispensing one additional prescription. The explanatory variables used in the models include percent of total prescriptions that are Medicaid, percent other third-party prescriptions, prescription volume (in quartile ranges or continuous), percent of total prescriptions that are new, as opposed to refills, independent versus chain pharmacy, whether emergency services are offered, pharmacy hours per week, whether there is an in-house charge system for prescription sales, and physical setting for the pharmacy (free standing, mass merchant, and other). We were not able to include information on type of pharmacy, or geographic locations, due to the large number of missing values.

Chapter 3

Results

A total of 390 pharmacies responded to the survey, reflecting a sample of 31.5% out of 1240 pharmacies in Maryland. Three pharmacies were excluded from the analysis because they did not report the total number of prescriptions per year. Thus, the final sample size was 387. All results are based on the 387 valid responses, adjusted for outliers as described on page 8 of the Methods Section.

Characteristics of Responding Pharmacies

Table 2 provides characteristics of the responding pharmacies. Almost all (98%) pharmacies responding to the survey are organized as corporations, and 90% describe themselves as part of a larger chain. More than two out of five are located in shopping centers, with a similar number situated in free-standing sites. With respect to location, the largest number reported being in the outer suburbs, but information on this characteristic must be considered with caution due to the high item non-response. A high item non-response also was present for type of pharmacy, where all but one respondent reported being a retail provider, but responses were missing for almost half the observations. Relatively few pharmacies reported providing emergency services (4%), delivery services (8%) or in-house charge services (13%), and these characteristics were linked. For example, almost all pharmacies with emergency services were independent pharmacies, and none of the chain pharmacies provided such services. Among the 31 pharmacies providing delivery service, 30 of them were independent pharmacies and 1 of them was an institutional pharmacy. None of the chain pharmacies provided delivery services for prescription drugs. Among those pharmacies that allowed an in-house charge system for prescription sales, 25 of them were chain pharmacies, another 25 were independent pharmacies, and one was an institutional pharmacy. All pharmacies maintained an electronic patient profile system. Only 1% of pharmacies in our survey dispensed prescriptions to nursing home residents. Additional characteristics for reporting pharmacies are provided in Appendix A. Table 1.

Table 2 Selected Characteristics of Responding Pharmacies

Characteristic	Number of Pharmacies	Percent of Non-Missing Responses
Ownership Type		
Corporation	379	98%
Non-Corporation	8	2%
Ownership Affiliation		
Chain	349	90%
Independent	35	9%
Institutional	3	1%
Physical Setting		
Medical Office Building	8	2%
Shopping Center	164	44%
Free Standing	149	40%
Mass Merchant	30	8%
Downtown	17	5%
Other	3	1%
Missing	16	
Geographic Location		
Inner City	11	12%
Inner Ring Suburbs	11	12%
Outer Suburbs	49	53%
Rural	21	23%
Missing	295	
Type of Pharmacy		
Retail	195	99%
Long Term Care	1	1%
Missing	191	
Provides Emergency Services		
Yes	14	4%
No	373	96%
Provides Prescription Drug Delivery		
Yes	31	8%
No	356	92%
Provides In-House Store Charge System for Prescription Sales		
Yes	51	13%
No	336	87%
Maintains Electronic Patient Profile System		
Yes	387	100%
No	0	0%
Dispenses to Nursing Home Residents		
Yes	4	1%
No	383	99%

Table 3 provides information on the number and characteristics of prescriptions filled by the pharmacies. The mean total number of prescriptions was 45,662, but